

WHAT IS CLAIMED IS:

1 1. A method comprising:

- 2 (a) automatically and repeatedly collecting data indicative of an operating state of a
3 machine, and
- 4 (b) automatically transmitting information related to the collected data to a location
5 remote from the computer in the form of electronic mail messages complying with a
6 standard electronic mail messaging protocol.

1 2. The method of claim 1 also including:

- 2 (a) receiving the electronic mail messages at computer, and
3 (b) analyzing the information at the computer to derive performance measures.

1 3. The method of claim 2 also including

- 2 (a) generating a report embodying the performance measures, and
3 (b) making the report available electronically.

1 4. The method of claim 3 in which

- 2 (a) the report comprises a natural language document expressed in a natural language
3 format.

1 5. The method of claim 3 in which the report is made available on a web site.

2 6. The method of claim 1 in which the machine comprises a network server, desktop
3 computer, or an intelligent appliance.

1 7. The method of claim 1, in which the standard electronic mail messaging protocol
2 comprises a Simple Mail Transfer Protocol.

1 8. The method of claim 1, in which the collected data includes a time-ordered sequence of
2 performance measurements taken at fixed time intervals.

- 1 9. The method of claim 1, in which the collected data includes measurements of at least one
2 of CPU usage, process queue length, memory usage, memory paging rate, disk usage,
3 network usage, paging space occupancy, file system occupancy, and process resource
4 usage.
- 1 10. The method of claim 1, in which the information related to the collected data is
2 compressed and encrypted for inclusion in the electronic mail message.
- 1 11. The method of claim 1, in which the collected data is collected from at least one of: a
2 registry, a system call, a virtual file system, a virtual device, and an input/output control
3 call to a device.
- 1 12. An article comprising a machine readable medium on which are tangibly stored machine-
2 executable instructions for monitoring a machine, the instructions being operable to cause
3 a machine to:
- 4 (a) automatically and repeatedly collect data indicative of an operating state of the
5 machine, and
- 6 (b) automatically transmit information related to the collected data to a location remote
7 from the machine in the form of electronic mail messages complying with a
8 standard electronic mail messaging protocol.
- 1 13. The computer program product of claim 12 in which the computer comprises a network
2 server.
- 1 14. The article of claim 12, in which the standard electronic mail messaging protocol
2 comprises a Simple Mail Transfer Protocol.
- 1 15. The article of claim 12, in which the collected data includes a time-ordered sequence of
2 performance measurements taken at fixed time intervals.
- 1 16. The article of claim 12, in which the collected data includes measurements of at least one
2 of CPU usage, process queue length, memory usage, memory paging rate, disk usage,

3 network usage, paging space occupancy, file system occupancy, and process resource
4 usage.

1 17. The article of claim 12, in which the information related to the collected data is
2 compressed and encrypted for inclusion in the electronic mail message.

1 18. The article of claim 12, in which the collected data is collected from at least one of: a
2 registry, a system call, a virtual file system, a virtual device, and an input/output control
3 call to a device.

1 19. A method comprising

2 (a) automatically and repeatedly receiving electronic mail messages that include
3 information related to remotely collected data indicative of a performance of a
4 machine, the electronic mail messages complying with a standard electronic mail
5 messaging protocol, and

6 (b) automatically analyzing the information to determine the performance of the
7 machine.

1 20. The method of claim 19 further comprising:

2 (a) extracting the information from the electronic mail messages.

1 21. The method of claim 20 further comprising generating a natural language report based on
2 the analysis.

1 22. The method of claim 19, further comprising:

2 generating an electronic mail message that includes the report; and
3 transmitting the electronic mail message over a network.

1 23. The method of claim 19, wherein the collected data includes at least one time ordered
2 sequence of performance measurements and wherein:

3 analyzing the collected data includes comparing at least some of the collected data
4 with a corresponding threshold value to determine whether the performance
5 measurements are within a range of acceptable values.

1 24. The method of claim 23, wherein generating the performance report includes:
2 selecting an information item based on the comparison of the performance
3 measurement; and
4 adding the selected information item to the performance report.

1 25. The method of claim 23 wherein:
2 analyzing the collected data includes determining the number of performance
3 measurements that are within the range of acceptable values; and
4 selecting the information item is further based on the number of performance
5 measurements that are within the range of acceptable values.

1 26. The method of claim 23 wherein the item of information includes a natural language
2 sentence.

1 27. The method of claim 26 wherein the item of information includes at least one of a
2 measurement value or the threshold value.

1 28. The method of claim 26 wherein at least part of the natural language sentence is
2 enhanced to draw attention to the sentence.

1 29. The method of claim 28 wherein the part of the natural language sentence is enhanced by
2 at least one of bold typeface, italicized typeface, colored typeface, underlining, and a
3 different font size.

1 30. The method of claim 23 wherein the item of information includes a graphical display.

1 31. The method of claim 26 wherein at least part of the natural language sentence is a
2 hyperlink to more detailed information about a section of the sequence of performance
3 measurements.

1 32. An article comprising a machine readable medium on which are tangibly stored machine-
2 executable instructions for monitoring a remote machine, the instructions being operable
3 to cause a machine to:

- 4 (a) automatically and repeatedly receive electronic mail messages that include
5 information related to remotely collected data indicative of a performance of the
6 remote machine, the electronic mail messages complying with a standard electronic
7 mail messaging protocol, and
- 8 (b) automatically analyze the information to determine the performance of the remote
9 machine.

1 33. The article of claim 32, wherein the instructions further cause the processor to:

- 2 (a) extract the information from the electronic mail messages.

1 34. The article of claim 33 wherein the instructions further cause the processor to generate a
2 natural language report based on the analysis.

1 35. The article of claim 32, wherein the instructions further cause the processor to:
2 generate an electronic mail message that includes the report; and
3 transmit the electronic mail message over a network.

1 36. The article of claim 32, wherein the collected data includes at least one time ordered
2 sequence of performance measurements and wherein:
3 analyzing the collected data includes comparing at least some of the performance
4 measurements with a corresponding threshold value to determine whether the
5 performance measurements are within a range of acceptable values.

1 37. The article of claim 36, wherein generating the performance report includes:
2 selecting an information item based on the comparison of the performance
3 measurement; and
4 adding the selected information item to the performance report.

1 38. The article of claim 36 wherein:
2 analyzing the collected data includes determining the number of performance
3 measurements that are within the range of acceptable values; and
4 selecting the information item is further based on the number of performance
5 measurements that are within the range of acceptable values.

- 1 39. The article of claim 36 wherein the item of information includes a natural language
2 sentence.
- 1 40. The article of claim 39 wherein the item of information includes at least one of a
2 measurement value or the threshold value.
- 1 41. The article of claim 39 wherein at least part of the natural language sentence is enhanced
2 to draw attention to the sentence.
- 1 42. The article of claim 41 wherein the part of the natural language sentence is enhanced by
2 at least one of bold typeface, italicized typeface, colored typeface, underlining, and a
3 different font size.
- 1 43. The article of claim 36 wherein the item of information includes a graphical display.
- 1 44. The article of claim 39 wherein at least part of the natural language sentence is a
2 hyperlink to more detailed information about a section of the sequence of performance
3 measurements.

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